Report By:

National TAB
1329 E. KEMPER ROAD
SUITE 4210
CINCINNATI, OH 45246

Report: Inspection TAB Report

Function: Test, Adjust, & Balance

Date: 03/24/2025

Completed By: National TAB

PROJECT

03-24-25 CAVA MARLTON, NJ

349 ROUTE 70 WEST

MARLTON, NJ 08053

Client

CAVA

702 H ST NW

2nd floor

Washington, DC 20001

National TAB

Project: 03-24-25 CAVA MARLTON, NJ

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Project Summary

The summary below provides a quick understanding of our scope of work and general testing procedures. Enclosed in the report is further detail about your building performance including recommendations, asset data, and pictures. Our focus is to work with the trades to remedy any issues or deficiencies during the actual field balancing and not after the balancing has occurred to achieve a positive environment and outcome. The level of success is determined by the availability of the trades, possible parts needed, or time constraints.

RTU's (Roof Top Units) w/ Diffusers
Each of the RTU's were measured at their terminal devices or via traverse to establish a total flow for that unit. Each RTU was adjusted to within tolerance of the engineer's design flow. Each outlet was then adjusted to within tolerance of the design flow. Outside air was measured by reading the intake air opening with a velocity grid and multiplying by the free area. The outside air damper was adjusted until the airflow was within the design requirements. Any equipment that fell outside of that tolerance is noted throughout the report.

Kitchen Exhaust Hood & Associated Fans
Each kitchen exhaust fan was measured at the hood filter bay utilizing a velocity matrix and a manufacturer's correction factor. Each filter velocity is multiplied by the manufacturer's corrected area. The sum of these readings equals the total flow of the exhaust fans. The total flow of the exhaust was then adjusted to within tolerance of the design flow. . Any EF's that fell outside of this tolerance is noted throughout the report.

MUA (Make Up Air Unit) w/ PSP
Total flow for the MAU (Make-up Air Unit) unit was measured by readings taken at the discharge of the hood's perforated supply plenum. Readings taken with a velocity matrix were averaged and multiplied by a manufacturer's corrected area. Adjustments to the fan speed were made in order to bring the unit to within design tolerance. Any MUA's that fell outside of this tolerance is noted throughout the report.

General Exhaust Fans w/ Grilles
The general exhaust fans were measured by reading each air device with a flow hood. The total airflow for each fan is equivalent to the sum of these readings. Fan speed was then adjusted so that the airflow was within tolerance of design. Each terminal device was balanced to within tolerance of the design volume using the installed volume dampers. Any equipment that fell outside of this tolerance is noted throughout the report.

Final Building Tests
After completing the test and balance the final building pressure was measured. It was confirmed that the building pressure fell within acceptable tolerances of -0.02" wc to +0.02" wc and that the pressure measurement coincides with the actual and design net airflow. Any deviations from these standards are noted throughout the report.
The hood capture was tested at the perimeter of the hood and the cook top level with the equipment heat on to ensure satisfactory hood capture and containment.

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AIR BALANCE SCHEDULE

UNIT	AREA SERVED	HVAC SUPPLY		HVAC RETURN		HVAC OUTDOOR		OA %		HOOD MAKE-UP		HOOD EXHAUST		GENERAL EXH.	
		DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL	DESIGN	ACTUAL
RTU-1	DINING	4000	3892	3570	3448	430	444	10.8%	11.4%						
RTU-2	KITCHEN	4000	3838	3535	3346	465	492	11.6%	12.8%						
MUA-1	KITCHEN									1960	1985				
KEF-1	HOOD											2275	2286		
EF-1	RESTROOM													125	158
EF-2	RESTROOM													125	168
TOTALS		8000	7730	7105	6794	895	936			1960	1985	2275	2286	250	326

NET BUILDING AIRFLOW CALCULATION

TOTALS	DESIGN	ACTUAL
TOTAL OA	2855	2921
TOTAL EXHAUST	2525	2612
NET AIRFLOW	330	309

DOOR TESTED	BUILDING PRESSURE MEASUREMENTS (IN. H20)
FRONT	0.0061
SIDE	0.0023
REAR	0.0044
AVERAGE	**0.0043**

FINAL CHECKS

ACTUAL NET AIRFLOW COINCIDES WITH DESIGN: ✓

MEASURED PRESSURES COINCIDES WITH ACTUAL NET AIRFLOW: ✓

PRESSURE FALLS WITHIN IMC TOLERANCE OF +/-0.02" W.C. ✓

NOTES:

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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: AHU/RTU

Asset: RTU1 AREA:DINING

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2F4480811
Model Num	ZJ120S	ZJ120S24U2D6RCE2E3
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	20X24X2
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR RELIANCE
Frame	-	56HZ
Horsepower	3.1	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.3

Drive Data	
	Actual
Motor Sheave Size	1VL50
Motor Bore Size	0.875
Motor Sheave SetPt	4 TURNS OUT
Fan Sheave Size	AK61
Fan Sheave Bore	1"
Belt CL Distance	18.5"
Num of Belts	1
Belt Size	A52
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	4000	3892
SF RPM	-	1077
RA CFM	3570	3448
OA CFM	430	444
RL Voltage	-	213.9
RL Amperage	-	7.1VFD
SF Rotation	-	CW
SF System SetPt	-	60HZ
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	18%/26%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	DEFAULT

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-0.74”
Fan Suction SP	-	-1.01”
Fan Discharge SP	-	0.68”
Total ESP	1.5"	1.42”
Fan Total SP	-	1.69”

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

Completed By: Tyler Youells on 03/24/2025

Unit Data - PHOTO LOG

03/21/2025

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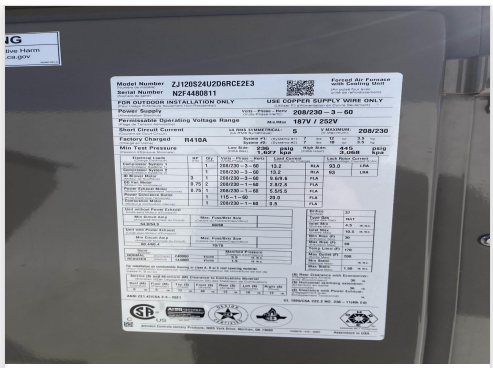

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Project:03-24-25 CAVA MARLTON, NJ

AHU/RTU

Diffuser Supply (GRD)

RTU1/DINING

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	DINING	D	24"	330	0.56	486	440	335	101.5
SGRD2	DINING	D	24"	330	0.56	537	486	323	97.9
SGRD3	DINING	D	22"	330	0.56	461	417	309	93.6
SGRD4	DINING	D	22"	330	0.56	292	264	334	101.2
SGRD5	DINING	D	20"	330	0.56	345	312	330	100.0
SGRD6	DINING	D	20"	330	0.56	494	446	341	103.3
SGRD7	DINING	D	18"	330	0.56	341	309	320	97.0
SGRD8	DINING	D	18"	330	0.56	383	347	318	96.4
SGRD9	DINING	D	16"	330	0.56	279	253	333	100.9
SGRD10	DINING	D	16"	330	0.56	271	246	329	99.7
SGRD11	DINING	D	12"	330	0.56	236	213	301	91.2
SGRD12	DINING	D	12"	330	0.56	226	205	319	96.7
Total				3960		4351	3938	3892	98.28%

Completed By: Tyler Youells on 03/21/2025

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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: AHU/RTU

Asset: RTU2 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	YORK	YORK
Serial Num	-	N2F4480812
Model Num	ZJ120S	ZJ120S24U2D6RCE2E3
Type	RTU	RTU
Configuration	VERTICAL	VERTICAL
Num OA Filters 1	-	1
OA Filter Size 1	-	30X22”
Num Final Filter 1	-	4
Final Filter Size 1	-	20X24X2

Motor Data		
	Design	**Actual**
Motor MFG	-	BALDOR RELIANCE
Frame	-	56HZ
Horsepower	3.1	3
Motor Rpm	-	1750
Phase	3	3
Rated Voltage	208	208
Rated Amperage	-	8.3

Drive Data	
	Actual
Motor Sheave Size	1VM50
Motor Bore Size	0.875"
Motor Sheave SetPt	1 TURN OUT
Fan Sheave Size	6.5”
Fan Sheave Bore	1”
Belt CL Distance	18.5”
Num of Belts	1
Belt Size	A52
Belt Alignment	GOOD

Test Data		
	Design	**Actual**
SF CFM	4000	3838
SF RPM	-	1224
RA CFM	3535	3346
OA CFM	465	492
RL Voltage	-	214.1
RL Amperage	-	8.25 VFD
SF Rotation	-	CW
SF System SetPt	-	60HZ
RA Damper Position	-	MECHANICAL LINKAGE
Min OA Damper Position	-	19%/28%
Min OA Damper Type	-	ECONOMIZER
OA Enthalpy Setpt	-	DEFAULT

Performance Data		
	Design	**Actual**
MA Plenum SP	-	-1.08"
Fan Suction SP	-	-1.45"
Fan Discharge SP	-	0.77"
Total ESP	1.5"	1.85"
Fan Total SP	-	2.22"

General	
	Actual
Fan Rotation Correct	YES
Unit Filters Clean	YES
Condensate Drain Installed	YES

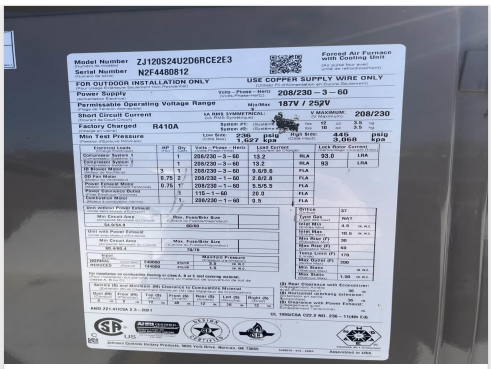
Completed By: Tyler Youells on 03/24/2025

Notes:
[1] CONNECTED LOAD 4200CFM, UNIT DESIGN 4000. PROPORTIONALLY REDUCED CONNECTED LOAD TO 4000CFM

Written By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG

03/21/2025



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Project:03-24-25 CAVA MARLTON, NJ

AHU/RTU

Diffuser Supply (GRD)

RTU2/KITCHEN

Asset									
Asset Name	**Location**	**Type**	**Size**	**DESIGN CFM**	**AK**	**CFM(1)**	**CFM(2)**	**FINAL CFM**	**% to design**
SGRD1	KITCHEN	E	10"	266	1	215	200	249	93.6
SGRD2	KITCHEN	E	10"	266	1	201	207	243	91.4
SGRD3	KITCHEN	E	10"	266	1	193	194	251	94.4
SGRD4	KITCHEN	E	10"	266	1	201	210	240	90.2
SGRD5	KITCHEN	A	6"	95	1	88	93	97	102.1
SGRD6	KITCHEN	A	12"	380	1	630	504	382	100.5
SGRD7	KITCHEN	A	6"	95	1	33	83	91	95.8
SGRD8	RESTROOM	C	6"	47	1	56	56	45	95.7
SGRD9	RESTROOM	C	6"	47	1	71	79	46	97.9
SGRD10	KITCHEN	A	8"	190	1	225	148	201	105.8
SGRD11	KITCHEN	A	8"	190	1	145	234	188	98.9
SGRD12	KITCHEN	A	12"	380	1	305	350	377	99.2
SGRD13	KITCHEN	A	12"	380	1	356	348	369	97.1
SGRD14	KITCHEN	A	12"	380	1	308	343	384	101.1
SGRD15	PSP	ACPSP	6X140	737	4.43	713	717	675	91.6
Total				3985		3740	3766	3838	96.31%

Completed By: Tyler Youells on 03/24/2025

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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: FAN - Exhaust

Asset: EF1 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	GREENHECK
Model Num	GC-186	SP-B150-QD
Serial Num	-	188825984-0040
Type	CEILING	CEILING
Configuration	HORIZONTAL	HORIZONTAL DISCHARGE

Test Data		
	Design	**Actual**
CFM	125	158
Fan RPM	-	1050
Fan Rotation	-	CW
Motor RPM	-	1050
System SetPt	-	FULL SPEED
RL Voltage	-	122.9
RL Amperage	-	1.72

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.8
Service Factor	-	1

Completed By: Tyler Youells on 03/21/2025

Notes:
[1] EF HIGH ON FLOW, NOT EQUIPPED WITH SPEED SWITCH. NOT EXPECTED TO CAUSE COMFORT ISSUE

Written By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG

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National TAB

Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: FAN - Exhaust

Asset: EF2 AREA:RESTROOM

Unit Data		
	Design	**Actual**
MFG	LOREN COOK	GREENHECK
Model Num	GC-186	SP-B150-QD
Serial Num	-	188825984-0034
Type	CEILING	CEILING
Configuration	HORIZONTAL	HORIZONTAL DISCHARGE

Motor Data		
	Design	**Actual**
Motor MFG	-	GREENHECK
Frame	-	NL
Horsepower	-	NL
Motor Rpm	-	1050
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	1.8
Service Factor	-	1

Test Data		
	Design	**Actual**
CFM	125	168
Fan RPM	-	1050
Fan Rotation	-	CW
Motor RPM	-	1050
System SetPt	-	FULL SPEED
RL Voltage	-	122.6
RL Amperage	-	1.71

Completed By: Tyler Youells on 03/21/2025

Notes:
[1] EF HIGH ON FLOW, NOT EQUIPPED WITH SPEED SWITCH. NOT EXPECTED TO CAUSE COMFORT ISSUE

Written By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG

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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: FAN - Exhaust

Asset: KEF1 AREA:HOOD

Unit Data		
	Design	**Actual**
MFG	CAPTIVEAIRE	ECONAIR
Model Num	DU85HFA	EADU85H
Serial Num	-	7142692
Type	UPBLAST	UPBLASY
Configuration	VERTICAL	VERTICAL

Motor Data		
	Design	**Actual**
Motor MFG	-	TELCO GREEN
Frame	-	NL
Horsepower	1	1
Motor Rpm	-	1800
Phase	1	1
Voltage (rated)	120	115
Amperage (rated)	-	11.6
Service Factor	-	1

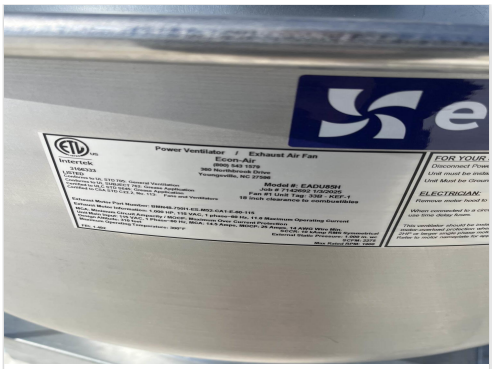
Test Data		
	Design	**Actual**
CFM	2275	2286
Fan RPM	-	1458
Fan Rotation	-	CCW
Motor RPM	-	1458
RL Voltage	-	122.9
RL Amperage	-	11.12
Suction ESP	-	-1.17”
Discharge ESP	-	ATM
Total ESP	1"	1.17”

Completed By: Tyler Youells on 03/21/2025

Notes:
[1] 81% MAX SPEED

Written By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG



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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: FAN - Supply

Asset: MAU1 AREA:HOOD

Unit Data		
	Design	**Actual**
MFG	ECON-AIRE	ECON-AIRE
Model Num	EARTU1-I.200-16-5T-MPU	EARTU1-I.200-16-5T-MPU
Serial Num	-	7142692
Type	MAU	DOAS
Configuration	HORIZONTAL	VERTICAL DISCHARGE

Motor Data		
	Design	**Actual**
Motor MFG	-	ZHIEL ABEGG
Frame	-	NL
Horsepower	-	1.8KW
Motor Rpm	-	2150
Phase	-	3
Voltage (rated)	-	200
Amperage (rated)	-	6.1
Service Factor	-	1

Gas Heat		
	Design	**Actual**
Heater Operates (y/n)	-	YES
Flame Status (pass/fail)	-	PASS
Inlet Air Temp SetPt	-	55
Discharge Air Temp SetPt	-	60

Test Data		
	Design	**Actual**
CFM	1960	1985
SF RPM	-	1226
Motor RPM	-	1226
SF System SetPt	-	57%
RL Voltage	-	215.4/213.8/215.2/
RL Amperage	-	0.84/0.84/0.86
Total ESP	-	0.16”
Fan Discharge SP	-	0.16”

General	
	Actual
Fan Rotation Correct	YES

Completed By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG

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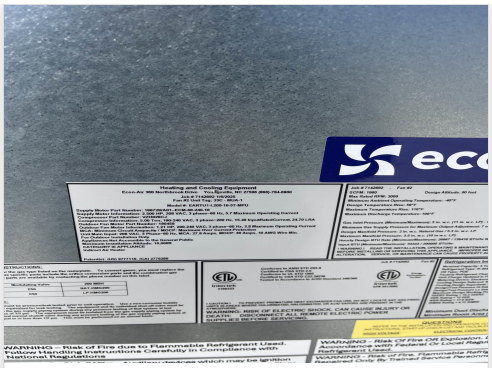

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Project: 03-24-25 CAVA MARLTON, NJ

System/Unit: Kitchen Hood Type I

Asset: HD1 AREA:KITCHEN

Unit Data		
	Design	**Actual**
MFG	ECON-AIR	ECON-AIR
Model Num	6030 EX-2-ACPSP-F	6030 EX-2-ACPSP-F
Job / Serial Num	-	7142692
Type	CANOPY	TYPE I CANOPY
Hood length	127"	127"
Hood Width	60"	60"
Supply Plenum Type	-	ACPSP
Supply Plenum Width	14"	14"
Supply Plenum Length	140"	140"

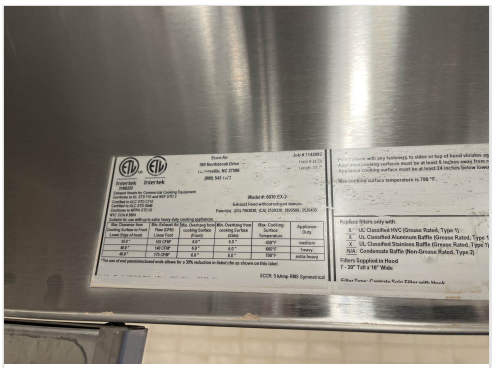
Test Data Exhaust		
	Design	**Actual**
Filter Type	CAPTRATE SOLO FILTER	CAPTRATE SOLO
Filter Size 1	20X16"	20X16"
Filter Qty 1	7	7
Filter AK factor size 1	2.08	2.08
Filter Total AK Area	14.56	14.56
Filter1 FPM	-	133
Filter2 FPM	-	155
Filter3 FPM	-	164
Filter4 FPM	-	176
Filter5 FPM	-	166
Filter6 FPM	-	157
Filter7 FPM	-	150
Filter Ave FPM(corr)	-	157
CFM	2275	2286

Cooking Equipment	
	Actual
Item 1	FRYER
Item 2	GRIDDLE
Item 3	4-BURNER STOVE
Item 4	OVEN

Test Data Supply		
	Design	**Actual**
Total Area	13.61	13.6
Kv factor (Vel)	0.89	0.89
Num of Readings	-	11
Reading1 FPM	-	152
Reading2 FPM	-	161
Reading3 FPM	-	142
Reading4 FPM	-	173
Reading5 FPM	-	178
Reading6 FPM	-	144
Reading7 FPM	-	151
Reading8 FPM	-	189
Reading9 FPM	-	173
Reading10 FPM	-	179
Reading11 FPM	-	163
Ave FPM(corr)	-	164
CFM	1960	1985

Completed By: Tyler Youells on 03/21/2025

Unit Data - PHOTO LOG



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